2/5/15 (Item 15 from file: 377)
DIALOG(R)File 377:Derwent Drug File

00098959 DERWENT ACCESSION NUMBER: 84-54432
Efficacy and Safety of Timolol for Prevention of Supraventricular Tachyarrhythmias after Coronary Artery Bypass Surgery.
White H D; Antman E M; Glynn M A; Collins J J; Cohn L H; Shemin R J
Circulation 70, No. 3, 479-84, 1984
CODEN: CIRCAZ ISSN: 0009-7322 LANGUAGE: English RECORD TYPE: Abstract

REPRINT ADDRESS: Cardiovascular Division, Brigham and Women's Hospital, 75 Francis St., Boston, MA 02115, U.S.A. (Friedman P.L.., 7 authors)

ABSTRACT:
41 Patients undergoing coronary artery bypass surgery were assigned to i.v. and p.o. timolol (TM) or placebo in a double-blind **postoperative** clinical trial lasting 7 days. Previous therapy incorporated propranolol, metoprolol, **atenolol**, nadolol and TM, and 2 placebo patients were taking verapamil. Subjects had continuous ECG recordings taken throughout the trial period. TM reduced the frequency of supraventricular tachycardia and atrial fibrillation and flutter. 4 Placebo patients and 1 TM patient required therapy for symptomatic arrhythmias in the postoperative period. 2 TM patients developed anusea, and 1 placebo subject complained of wheezing. Prophylactic use of TM after coronary artery surgery is safe and effective in reducing severity of arrhythmias.

SPECIAL FEATURES: 2 Fig. 4 Tab. 12 Ref.
LINK TERMS:
01; TIMOLOL --TR; TIMOLOL --AE; TACHYCARDIA --TR; SUPRAVENTRICULAR --TR; ATRIAL --TR; FIBRILLATION --TR; NAUSEA --AE; CARDIOPATHY --TR; ARRHYTHMIA --TR; VERAPAMIL --RC; SYMPATHOLYTIC-BETA --FT; CASES --FT; CORONARY --FT; SURGERY --FT; BYPASS --FT; ARTERY --FT; DOUBLE --FT; BLIND-TEST --FT; POSTOPERATIVE --FT; CLIN.TRIAL --FT; PLACEBO --FT; ANTIARRHYTHMIC --FT; I.V. --FT; P.O. --FT; PROPHYLAXIS --FT; SYMPATHOLYTICS-BETA --FT; VESSEL --FT; VESSEL --FT; TIMOLOL --RN; TR --FT ; AE --FT

SECTION HEADINGS: Cardiovascular (9); Adverse Reactions (35)

background

00429516 807072594
TITLE: Comparison of propafenone to atenolol for the prophylaxis of postcardiotomy supraventricular tachyarrhythmias: a prospective trial.
AUTHOR: Merrick A F; Odom N J; Keenan D J M; Grotte G J
CORPORATE SOURCE: Manchester Royal Infirmary, Manchester, England.
JOURNAL: European Journal of Cardio Thoracic Surgery (Eur-J-Cardio-Thorac-Surg) 9: 146-149, Mar 1995.
PUBLICATION DATE: 1 March 1995 (19950301)
LANGUAGE: English
ADIS TITLE: Propafenone vs atenolol: therapeutic use. Supraventricular tachycardia.
ADIS LMS: Arrhythmias (Summary): Alert no. 6, 1995
RECORD TYPE: Summary
DOCUMENT TYPE: Clinical study

Adis Evaluation: 78
Positive features: well-defined patient selection and exclusion criteria, and patient demographical data; controls included to reduce bias and variation; adequate patient numbers; patients randomised to comparable treatment groups; drug dosage and duration appropriate; results and adverse events adequately presented.
Negative features: concomitant medication for other indications not reported, if any.

SUMMARY TEXT:
Purpose:
The incidence of supraventricular tachycardia (SVT) after heart surgery can be as high as 50%. Although SVTs are usually transient in nature, up to 20% of patients may require treatment. Atenolol is a beta sub(1)-selective beta-blocker which is used effectively as prophylaxis against SVT. Propafenone is a class Ic antiarrhythmic agent with weak beta-blocking and calcium antagonistic activity. It is more effective at controlling ventricular rate than verapamil or beta-blockers, has no more adverse effects and is less negatively inotropic. This study compared the efficacy and tolerability of propafenone (Knoll) with that of atenolol (ICI Pharmaceuticals) as prophylaxis against SVT in patients undergoing heart surgery.
Author comments:
`In our study propafenone and atenolol were of approximately equal efficacy in preventing SVTs following cardiopulmonary bypass. Our results were similar whether patients undergoing coronary artery surgery only or all patients were analysed. . . . We suggest that propafenone would be a useful agent for the prophylaxis of SVTs in patients undergoing coronary artery surgery (and other cardiac surgery although our numbers in this group are small), including patients in whom a beta-blocker is contraindicated, and deserves further investigation.'
Study details:
Design: randomised, double-blind, parallel
Control: drug comparison
Subjects:
Type: patients
No: 207

Groups: 2
Age: 26-73 (mean 57) years
Sex: 170 male & 37 female
Characteristics:
patients had previously received beta-blockers (n = 147) or calcium antagonists (139). 11 patients had undergone previous heart surgery and 126 had previously experienced a myocardial infarction. Patients also had diabetes (33), hypertension (77), hyperlipidaemia (87), cardiomegaly (45) and/or an impaired ventricle (122).
Drug table:

Drug	Dose	Route	Frequency	Duration
Propafenone	600 mg/day	PO	bid	<= 7 (mean 5.25) days
Atenolol	50 mg/day	PO	od	<= 7 (mean 4) days

Drugs were administered from the first to the seventh **postoperative** day (or as soon as the patient was able to take oral medication). If BP was < 110mm Hg or the HR was < 80 beats/min then a dose of atenolol was excluded. The development of symptomatic SVT, recurrent SVT or adverse events related to therapy necessitated treatment withdrawal.
Results table:

No. of patients	Propafenone (n=105)	Atenolol (n=102)
Incidence of SVT	13	11

All patients with SVT responded to standard treatment with verapamil, digoxin, amiodarone and/or cardioversion. Two patients died during the study. The propafenone recipient who died experienced mesenteric infarction while the atenolol recipient who died experienced multiorgan failure secondary to pseudomembranous colitis.
Side effects table:

Side effects (events)	Propafenone	Atenolol
Nausea	2	1
Bronchospasm	0	2
Ventricular tachycardia	1	0

Note:
Knoll and ICI Pharmaceuticals supplied, respectively, the propafenone and atenolol with placebo tablets.

NO. OF PATIENTS: 207
NO. OF GROUPS: 2

DESCRIPTORS: Atenolol, therapeutic-use; Heart-surgery; Propafenone,

00012889 900241922
TITLE: The use of atenolol in the prevention of supraventricular arrhythmias following coronary artery surgery.
AUTHOR: Lamb R K; Prabhakar G; Thorpe J A C; Smith S; Norton R; et al
CORPORATE SOURCE: Walsgrave Hospital, Coventry, England
Northern General Hospital, Sheffield, England.
JOURNAL: European Heart Journal 9: 32-36, Jan 1988.
PUBLICATION DATE: January 1988 (19880100)
LANGUAGE: English
ADIS TITLE: Atenolol: therapeutic use. Supraventricular arrhythmias. Following coronary artery surgery.
ADIS LMS: Antiarrhythmic Drugs in Arrhythmias (Summary): Alert No 6, 1988.
RECORD TYPE: SUMMARY
DOCUMENT TYPE: Study

Adis evaluation: 63
This study included an adequate number of suitably selected patients. Patients were randomized to treatment, and group comparability was established. Controls to reduce variation were provided and the results and methods of assessment were reasonably well reported. However, information regarding concurrent therapy was omitted and there were no controls to reduce bias. Nevertheless, the study provides useful information on the perioperative use of atenolol in the prevention of arrhythmias.

SUMMARY TEXT:
Drug table:

Drug:	Atenolol
Treatment duration:	8 days
Dose:	50mg.day
Action:	Cardioselective beta blocker
Route of Administration:	Oral

Study details:
Design: Multicenter/Controlled
Therapeutic indication: Antiarrhythmic
Disease treated: Supraventricular arrhythmias
Subjects:
Type: Patient
No: 60
Age: Adult
Purpose
To determine the efficacy of atenolol in the prevention of supraventricular arrhythmias following elective coronary artery surgery.
52 men and 8 women patients, of mean age 55 years, undergoing elective coronary artery surgery full details of surgical procedures provided . Patients with a history of arrhythmia, asthma or peripheral vascular disease, evidence of congestive heart failure or

left ventricular ejection fraction < 0.4 were excluded from the study.
After withdrawal of any betablocker therapy (n = 16), 30 patients received atenolol from 72 hours prior to surgery until the seventh day after the operation. Other preoperative therapy no details given remained unchanged. In 30 'control' patients, all preoperative drug therapy including betablockers (n = 14) was given until the day of surgery, after which betablockers were withdrawn. EKG monitoring was performed continuously during the first 72 hours postoperatively, and then daily. The treatment groups were comparable in terms of age, sex, pre-operative infarctions and betablocker therapy, endarterectomy, NYHA class, number of diseased vessels, number of grafts, ischemic time and serum potassium.
Dosage:
Atenolol: 50mg once daily, orally.
Results:
One out of 30 (3%) **atenolol** recipients and 11/30 (37%) control patients had **postoperative** supraventricular tachyarrhythmias (p = 0.001 between patient groups). Atrial fibrillation with a ventricular rate > 120 beats/min developed in 1 **atenolol** recipient and 10 control patients. One control patient had frequent premature atrial extrasystoles. Most arrhythmias occurred on Days 1 and 2 after surgery. The development of supraventricular arrhythmias did not correlate with age, sex, severity of preoperative symptoms, previous myocardial infarction, extent of coronary artery disease, perioperative serum potassium levels, technique of myocardial preservation, ischemic time, number and site of saphenous vein grafts or endarterectomies.
Author comments:
Atenolol 50mg daily, starting 72 hours preoperatively, appears '. . . to be very effective in reducing the incidence of supraventricular tachyarrhythmias following elective myocardial revascularization operations in patients with good left ventricular function'.
Side effects:
Symptomatic adverse effects, if any, not given.

NO. OF PATIENTS: 60

7218167 EMBASE No: 88218301

Intravenous labetalol for the control of hypertension following repair of coarctation of the aorta

Bojar R.M.; Weiner B.; Cleveland R.J.

Department of Cardiothoracic Surgery, New England Medical Center Hospitals, Boston, MA 02111 USA

CLIN. CARDIOL. (USA) , 1988, 11/9 (639-641) CODEN: CLCAD ISSN: 0160-9289

LANGUAGES: English

SUBFILES: 006; 007; 018

Paradoxical hypertension is a relatively common complication of surgical repair of coarctation of the aorta. An early phase of systolic hypertension has been ascribed to elevated levels of norepinephrine. Activation of the renin-angiotensin system from sympathetic stimulation has been implicated in a later phase of systolic and diastolic hypertension that can result in mesenteric arteritis. The use of a rapidly acting, titratable intravenous alpha- and beta-**adrenergic blocker** , such as labetalol hydrochloride, addresses both of these neurohormonal mechanisms. In the intravenous form, it would appear to be an excellent choice for the management of early **postoperative** hypertension and it can be converted to the oral form in cases of persistent hypertension. We report for the first time the use of labetalol in two young patients for the control of paradoxical hypertension following coarctation repair.

EMTAGS:
Great blood vessel 0922; Congenital disorder 0315; Cardiovascular system 0920; Therapy 0160; Peripheral vascular system 0923; Adult 0018; Priority journal 0007; Human 0888; Male 0041; Case report 0151; Intravenous drug administration 0182

DRUG DESCRIPTORS:
*labetalol--drug therapy--dt
glyceryl trinitrate; trimetaphan; captopril

MEDICAL DESCRIPTORS:
*aorta coarctation--congenital disorder--cn; *hypertension--drug therapy --dt; *mesenteric artery; *arteritis--complication--co
adult

EMCLAS DRUG CODES:
03710020000; 03701020101; 03701020102; 03710050000; 03734020000

CAS REGISTRY NO.: 32780-64-6; 36894-69-6; 55-63-0; 68-91-7; 7187-66-8;

00017573 900242404
TITLE: Atenolol for the prevention of arrhythmias following coronary artery bypass grafting.
AUTHOR: Matangi M F; Strickland J; Garbe G J; Habib N; Basu A K; et al
CORPORATE SOURCE: Departments of Cardiology and Cardiothoracic Surgery, Plains Health Center, Regina, Saskatchewan, Canada.
JOURNAL: Canadian Journal of Cardiology 5: 229-234, May 1989.
PUBLICATION DATE: May 1989 (19890500)
LANGUAGE: English
ADIS TITLE: Atenolol: therapeutic use. Supraventricular arrhythmias. Following coronary artery bypass.
ADIS LMS: Antiarrhythmic Drugs in Arrhythmias (Summary): Alert No 9, 1989.
RECORD TYPE: SUMMARY
DOCUMENT TYPE: Study

Adis evaluation: 81
The aim of this study was clear and patients were selected according to suitable criteria with demographical data provided. Patients were randomized to comparable treatment groups and controls were present to reduce variation and bias. Patients were assessed by continuous Holter monitoring for a period adequate to assess efficacy. This study provides clinically relevant data on the prophylaxis of postoperative arrhythmias.

SUMMARY TEXT:
Drug table:

Drug:	Atenolol
Treatment duration:	8 days
Dose:	5mg.day + 50mg.day
Action:	Cardioselective beta blocker
Dose form:	~~Infusion +~~ -
Route of Administration:	IV + Oral

Study details:
Design: Double blind/Single center/Controlled
Therapeutic indication: Antiarrhythmic
Disease treated: Postoperative supraventricular arrhythmias
Subjects:
Type: Patient
No: 70
Age: Adult
Purpose
Clinically important supraventricular arrhythmic episodes occur in 20-40% of patients in the immediate **postoperative** period following aortocoronary bypass grafting. The aim of this placebo-controlled trial was to assess the efficacy and tolerability of **atenolol** in preventing atrial and ventricular arrhythmias following coronary artery bypass grafting.
55 men and 15 women, of mean age 59 years, undergoing elective

aortocoronary bypass grafting. 31 patients had hypertension, 52 had a smoking history and 8 had diabetes mellitus. Exclusion criteria: age > 70 years, previous coronary artery bypass, significant congestive heart failure, preoperative ejection fraction < 30%, preoperative hypotension, postoperative hemodynamic complication, concomitant left ventricular aneurysm resection or valve replacement, persistent bradycardia, second or third degree heart block.
Patients with no contraindications 2-3 hours after the operation were randomized to comparable treatment groups to receive either atenolol (n = 35) or placebo (35) IV infusion at 0 and 24 hours, then orally from 48 hours for 6 days. Continuous Holter recordings were taken from 24 hours preoperatively to 8 days postoperatively. 12-lead EKGs were performed preoperatively, immediately postoperatively and daily thereafter, with hemodynamic parameters recorded regularly. Supraventricular arrhythmias (atrial tachycardia, fibrillation and flutter) were classified as mild (< 0.5 min, < 140 beats/min), moderate (0.5-30 min, 140-180 beats/min) or severe (> 30 min, > 180 beats/min).
Concomitant medication: calcium antagonists were discontinued >/= 24 hours prior to surgery; beta-blockers (n = 50) and nitrates were continued up to the time of surgery.
Dosage:
Atenolol: 5mg in 10ml saline diluted in 5% dextrose as an IV infusion over 30 min; 50 mg/day orally.
Placebo: matching IV and oral doses.
Results:
Atenolol significantly reduced the number of moderate supraventricular episodes (8 vs 20 placebo, $p < 0.025$), moderate atrial fibrillation/flutter episodes (22 vs 122 placebo, $p < 0.0005$) and severe atrial fibrillation/flutter episodes (5 vs 19 placebo, $p < 0.005$). There were no significant differences between groups with respect to mild or severe supraventricular episodes, mild atrial fibrillation/flutter episodes, ventricular arrhythmias or creatine kinase kinetics. 12 placebo vs 4 atenolol recipients had severe supraventricular arrhythmias ($p < 0.05$), with 11 placebo vs 3 atenolol patients requiring treatment ($p < 0.05$). Atenolol significantly reduced mild (304 vs 918 placebo), moderate (26 vs 108 placebo) and severe (4 vs 10 placebo) supraventricular episodes in patients receiving beta-blockers preoperatively.
Although there were fewer supraventricular episodes in placebo recipients who did not receive beta-blockers preoperatively (109 episodes in 12 patients) vs those who did (1036 episodes in 23 patients), atenolol recipients who did not receive beta-blockers had significantly ($p < 0.0005$) more mild supraventricular episodes (633 vs 64 placebo). Therapy was discontinued in 1 atenolol recipient because of asymptomatic atrioventricular dissociation and in 5 placebo recipients because of profound bradycardia and excessive peripheral edema (3) and adverse effects (2).
Author comments:
'Overall, it has been demonstrated that prophylactic atenolol as prescribed in this study following coronary artery bypass surgery is safe and effective at reducing the frequency and severity of all types of postoperative supraventricular arrhythmias.'.

Side effects:
Adverse effects noted in atenolol and placebo recipients, respectively, included hypotension (2 and 2), paresthesia (1 and 1), nausea (3 and 6), abnormal liver function (2 and 2) and rash (1 and 1). Dizziness (1) and nausea (1) resulted in discontinuation of therapy in 2 placebo recipients.

NO. OF PATIENTS: 70

DESCRIPTORS: Atenolol, antiarrhythmics, therapeutic use, treatment,

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=> b medline
FILE 'MEDLINE' ENTERED AT 10:47:40 ON 24 JUN 2002

 FILE LAST UPDATED: 23 JUN 2002 (20020623/UP).  FILE COVERS 1958 TO DATE.

 On June 9, 2002, MEDLINE was reloaded.  See HELP RLOAD for details.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2002 vocabulary.  Enter HELP THESAURUS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.

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C14. = Cardiovascular diseases

Subheadings
PC = Prevention + control
DT = Drug Therapy
AD = Administration + Dosage
TU = Therapeutic Use
PD = Pharmacology
PK = Pharmaco-kinetics

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ACCESSION NUMBER:    97072136     MEDLINE
DOCUMENT NUMBER:     97072136   PubMed ID: 8929262
TITLE:               Effect of atenolol on mortality and cardiovascular
                     morbidity after noncardiac surgery. Multicenter Study of
                     Perioperative Ischemia Research Group.
COMMENT:             Comment in: ACP J Club. 1997 May-Jun;126(3):58
                     Comment in: N Engl J Med. 1996 Dec 5;335(23):1761-3
                     Comment in: N Engl J Med. 1997 May 15;336(20):1452-3;
                     discussion 1453-4
                     Comment in: N Engl J Med. 1997 May 15;336(20):1452;
                     discussion 1453-4
                     Comment in: N Engl J Med. 1997 May 15;336(20):1452;
                     discussion 1453-4
                     Comment in: N Engl J Med. 1997 May 15;336(20):1453;
                     discussion 1453-4
                     Erratum in: N Engl J Med 1997 Apr 3;336(14):1039
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AUTHOR: Mangano D T; Layug E L; Wallace A; Tateo I
CORPORATE SOURCE: San Francisco Veterans Affairs Medical Center and University of California, CA 94121, USA.
SOURCE: NEW ENGLAND JOURNAL OF MEDICINE, (1996 Dec 5) 335 (23) 1713-20.
Journal code: 0255562. ISSN: 0028-4793.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 19980206
Entered Medline: 19961206

AB BACKGROUND: Perioperative myocardial ischemia is the single most important potentially reversible risk factor for mortality and cardiovascular complications after noncardiac surgery. Although more than 1 million patients have such complications annually, there is no effective preventive therapy. METHODS: We performed a randomized, double-blind, placebo-controlled trial to compare the effect of atenolol with that of a placebo on overall survival and cardiovascular morbidity in patients with or at risk for coronary artery disease who were undergoing noncardiac surgery. Atenolol was given intravenously before and immediately after surgery and orally thereafter for the duration of hospitalization. Patients were followed over the subsequent two years. RESULTS: A total of 200 patients were enrolled. Ninety-nine were assigned to the atenolol group, and 101 to the placebo group. One hundred ninety-four patients survived to be discharged from the hospital, and 192 of these were followed for two years. Overall mortality after discharge from the hospital was significantly lower among the atenolol-treated patients than among those who were given placebo over the six months following hospital discharge (0 vs. 8 percent, P<0.001), over the first year (3 percent vs. 14 percent, P=0.005), and over two years (10 percent vs. 21 percent, P=0.019). The principal effect was a reduction in deaths from cardiac causes during the first six to eight months. Combined cardiovascular outcomes were similarly reduced among the atenolol-treated patients; event-free survival throughout the two-year study period was 68 percent in the placebo group and 83 percent in the atenolol group (P=0.008). CONCLUSIONS: In patients who have or are at risk for coronary artery disease who must undergo noncardiac surgery, treatment with atenolol during hospitalization can reduce mortality and the incidence of cardiovascular complications for as long as two years after surgery.

L45 ANSWER 2 OF 32 MEDLINE
ACCESSION NUMBER: 97060238 MEDLINE
DOCUMENT NUMBER: 97060238 PubMed ID: 8903273
TITLE: Management of atrial fibrillation after coronary artery bypass graft.
AUTHOR: Olshansky B
CORPORATE SOURCE: Department of Cardiac Electrophysiology, Loyola University Medical Center, Maywood, Illinois, USA.
SOURCE: AMERICAN JOURNAL OF CARDIOLOGY, (1996 Oct 17) 78 (8A) 27-34. Ref: 57
Journal code: 0207277. ISSN: 0002-9149.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 19970128
Entered Medline: 19961217

AB More than 400,000 patients undergo coronary artery bypass graft surgery (CABG) each year in the United States. At least 20-30% of these patients have atrial fibrillation (Afib), making this arrhythmia one of the most common postoperative problems. This generally benign problem can increase surgical morbidity and the cost and length of hospital stay. If not treated promptly and effectively, Afib can delay a full and rapid recovery. Afib usually occurs in paroxysms between the second and fifth postoperative day and appears directly related to effects of surgery (pericarditis, changes in autonomic tone, cardioplegia, myocardial damage, fluid shifts, etc.). Although similar to Afib in other settings, beta-adrenergic blockade is more effective in preventing and terminating Afib in the postoperative setting. The unique circumstances that precipitate postoperative Afib may explain the favorable therapeutic and prophylactic actions of beta-adrenergic blockade. Other therapies such as amiodarone, sotalol, and digoxin are surprisingly ineffective for postoperative Afib, while intravenous diltiazem is not well tested in this setting. Despite the lack of proven benefit for some of these therapies, they are still frequently used in current clinical practice. Management of postoperative Afib is initially directed at ventricular rate control, but the ultimate goal is return to sinus rhythm. The approach to therapy depends on several clinical variables, including the time course of the arrhythmia, but hemodynamic stability of the patient is the key issue. Return to sinus rhythm may be difficult to achieve early after surgery, so opting for rate control is the best initial approach. If tolerated, beta-adrenergic blockade and calcium antagonism are the best first options. Class IA and III antiarrhythmic drugs should be reserved for persistent or poorly tolerated and prolonged episodes of Afib. Elective cardioversion, either by direct current or with drugs, should be delayed for as long as possible after surgery. Anticoagulation for post-CABG Afib remains controversial. More prudent use of presently available drugs to treat Afib could reduce morbidity, cost, and duration of hospital stay after CABG. More rapid-acting and reliably effective antiarrhythmic therapies with minimal adverse effects would greatly improve management of post-CABG Afib.

L45 ANSWER 3 OF 32 MEDLINE
ACCESSION NUMBER: 96414075 MEDLINE
DOCUMENT NUMBER: 96414075 PubMed ID: 8817135
TITLE: Efficacy and safety of low-dose propranolol versus diltiazem in the prophylaxis of supraventricular tachyarrhythmia after coronary artery bypass grafting.
AUTHOR: Babin-Ebell J; Keith P R; Elert O
CORPORATE SOURCE: Department of Cardiothoracic Surgery, University of Wurzburg, Germany.
SOURCE: EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY, (1996) 10 (6) 412-6.
Journal code: 8804069. ISSN: 1010-7940.
PUB. COUNTRY: Netherlands
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)

(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199612
ENTRY DATE: Entered STN: 19970128
Last Updated on STN: 19970128
Entered Medline: 19961226

AB OBJECTIVE: Supraventricular tachyarrhythmias (SVT) complicate postoperative management after coronary bypass surgery in about 30% of all patients. Though a prophylactic treatment both with beta-adrenergic blocking agents and the calcium antagonist diltiazem has been used for the prevention of post-operative SVT, no study yet has performed a prospective comparison of the efficacy of these therapies. METHODS: To investigate the prophylactic effect of either a calcium antagonist (diltiazem, 0.1 mg/kg per h i.v.) or a beta-adrenergic blocking agent (propranolol, 10 mg every 6 h postoperatively), we randomized prospectively 103 consecutive patients into three groups, the third one serving as a control group. Anti-arrhythmic medication was started with the procedure and was continued until the 3rd postoperative day. RESULTS: Preoperative conditions were the same for the three groups concerning age, extent of coronary heart disease, ventricular function and heart-related medication. There were no differences in intraoperative parameters or postoperative enzyme patterns. Diltiazem was ineffective in preventing SVT, the incidence being exactly the same as in the control group (35%). Propranolol reduced the occurrence of SVT significantly (7%, $P < 0.05$). Furthermore, patients treated with diltiazem needed positive inotropic support more often in the first hours after surgery than patients of the control group (30% vs 5%, $P < 0.01$). CONCLUSIONS: The perioperative administration of low-dose propranolol is considered a safe and effective drug prophylaxis to avoid the occurrence of SVT after bypass surgery.

L45 ANSWER 4 OF 32 MEDLINE
ACCESSION NUMBER: 96289550 MEDLINE
DOCUMENT NUMBER: 96289550 PubMed ID: 8682014
TITLE: Effect of metoprolol on death and cardiac events during a 2-year period after coronary artery bypass grafting. The MACB Study Group.
AUTHOR: Anonymous
SOURCE: EUROPEAN HEART JOURNAL, (1995 Dec) 16 (12) 1825-32.
Journal code: 8006263. ISSN: 0195-668X.
PUB. COUNTRY: ENGLAND: United Kingdom
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199608
ENTRY DATE: Entered STN: 19960828
Last Updated on STN: 19960828
Entered Medline: 19960816

AB PURPOSE: To evaluate the effect of long-term treatment with metoprolol after coronary bypass grafting on death and cardiac events. METHODS: Patients in western Sweden on whom coronary artery bypass grafting was performed between June 1988 and June 1991 were evaluated for inclusion during the first 3 weeks after surgery. Major exclusion criteria were age > 75 years, concomitant valve surgery, traditional contraindications to beta-blockers and unwillingness to participate. Patients were randomized in a double-blind fashion to 100 mg of metoprolol/placebo daily for 2

weeks and thereafter 200 mg daily for 2 years. RESULTS: Of 2365 patients who were operated on, 967 were randomized to either metoprolol (n = 480) or placebo (n = 487). Primary end points (death, non-fatal myocardial infarction, unstable angina pectoris, need for coronary artery bypass grafting or percutaneous transluminal angioplasty), were reached by 42 patients in the metoprolol group (8.8%), as compared with 39 in the placebo group (8.0%) (P = 0.73). Of all the patients randomized to metoprolol, 34% withdrew from blind treatment prematurely compared with 44% for placebo (P < 0.01). CONCLUSION: Prophylactic treatment with metoprolol over a 2-year period after coronary artery bypass grafting did not reduce death or the development of cardiac events. However, the 95% confidence limits ranged from the possibility of a 30% reduction in events to a 68% increase in events if patients were treated with metoprolol as compared with placebo.

L45 ANSWER 5 OF 32 MEDLINE
ACCESSION NUMBER: 96266226 MEDLINE
DOCUMENT NUMBER: 96266226 PubMed ID: 8678633
TITLE: Cardiac surgical conditions induced by beta-blockade: effect on myocardial fluid balance.
AUTHOR: Mehlhorn U; Allen S J; Adams D L; Davis K L; Gogola G R; Warters R D
CORPORATE SOURCE: Department of Anesthesiology, University of Texas-Houston Medical School 77030, USA.
SOURCE: ANNALS OF THORACIC SURGERY, (1996 Jul) 62 (1) 143-50. Journal code: 15030100R. ISSN: 0003-4975.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199608
ENTRY DATE: Entered STN: 19960822
Last Updated on STN: 19960822
Entered Medline: 19960814

AB BACKGROUND. Both crystalloid and blood cardioplegia result in cardiac dysfunction associated with myocardial edema. This edema is partially due to the lack of myocardial contraction during cardioplegia, which stops myocardial lymph flow. As an alternative, acceptable surgical conditions have been created in patients undergoing coronary artery bypass operations with esmolol-induced minimal myocardial contraction. We hypothesized that minimal myocardial contraction during circulatory support using either standard cardiopulmonary bypass (CPB) or a biventricular assist device would prevent myocardial edema by maintaining cardiac lymphatic function and thus prevent cardiac dysfunction. METHODS. We placed 6 dogs on CPB and 6 dogs on a biventricular assist device and serially measured myocardial lymph flow rate and myocardial water content in both groups and preload recruitable stroke work only in the CPB dogs. In all dogs we minimized heart rate with esmolol for 1 hour during total circulatory support. RESULTS. Although myocardial lymph flow remained at baseline level during CPB and increased during biventricular assistance, myocardial water accumulation still occurred during circulatory support. However, as edema resolved rapidly after separation from circulatory support, myocardial water content was only slightly increased after CPB and biventricular assistance, and preload recruitable stroke work was normal. CONCLUSIONS. Our data suggest that minimal myocardial contraction during both CPB and biventricular assistance supports myocardial lymphatic function, resulting in minimal myocardial edema formation associated with normal left ventricular performance after circulatory support. The concept of minimal

myocardial contraction may be a useful alternative for myocardial protection, especially in high-risk patients with compromised left ventricular function.

L45 ANSWER 6 OF 32 MEDLINE
ACCESSION NUMBER: 95306086 MEDLINE
DOCUMENT NUMBER: 95306086 PubMed ID: 7786531
TITLE: Comparison of propafenone to atenolol for the prophylaxis of postcardiotomy supraventricular tachyarrhythmias: a prospective trial.
AUTHOR: Merrick A F; Odom N J; Keenan D J; Grotte G J
CORPORATE SOURCE: Department of Cardiothoracic Surgery, Manchester Royal Infirmary, UK.
SOURCE: EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY, (1995) 9 (3) 146-9.
Journal code: 8804069. ISSN: 1010-7940.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199507
ENTRY DATE: Entered STN: 19950807
Last Updated on STN: 19950807
Entered Medline: 19950727

AB To compare the efficacy of propafenone to atenolol in the prevention of supraventricular tachyarrhythmias (SVT) following cardiac surgery, 207 consecutive patients were randomly allocated to receive either propafenone 300 mg twice daily (105 patients) or atenolol 50 mg once daily (102 patients) orally for 7 days after operation. Double blinding was achieved using placebos. The end point was the development of a SVT which was symptomatic, recurrent, or lasting over 2 minutes, or the occurrence of adverse effects possibly attributable to the drugs. The groups were well matched for age, sex, bypass- and cross-clamp times, and other data. Thirteen patients in the propafenone group and 11 in the atenolol group developed SVT during the first week after operation. (P = 0.89, non significant, chi-squared with Yates' correction). In our study propafenone and atenolol were of approximately equal efficacy in preventing post cardiotomy SVT. Propafenone may have an advantage in being less negatively inotropic than atenolol; it could therefore be used in patients with poor left ventricular function or marginal haemodynamics when a beta blocker is contraindicated.

L45 ANSWER 7 OF 32 MEDLINE
ACCESSION NUMBER: 94363985 MEDLINE
DOCUMENT NUMBER: 94363985 PubMed ID: 7915979
TITLE: Hemodynamic and renal effects of dopexamine and dobutamine in patients with reduced cardiac output following coronary artery bypass grafting.
AUTHOR: MacGregor D A; Butterworth J F 4th; Zaloga C P; Prielipp R C; James R; Royster R L
CORPORATE SOURCE: Department of Anesthesia, Wake Forest University, Winston-Salem, NC 27157.
SOURCE: CHEST, (1994 Sep) 106 (3) 835-41.
Journal code: 0231335. ISSN: 0012-3692.
PUB. COUNTRY: United States
(CLINICAL TRIAL)

Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199410
ENTRY DATE: Entered STN: 19941021
Last Updated on STN: 19950206
Entered Medline: 19941013

AB OBJECTIVE: Dopexamine hydrochloride is a novel synthetic adrenergic agonist that combines the renal effects of dopamine with the hemodynamic effects of dobutatmine. Our study is designed to compare the hemodynamic, diuretic, and natriuretic effects of dopexamine and dobutamine in patients with reduced cardiac index following heart surgery. DESIGN: Prospectively randomized, blinded study. SETTING: Operating room and intensive care unit of a large, urban, academic medical center. PATIENTS: Twenty-eight patients undergoing elective coronary artery bypass grafting (CABG) with preoperative ejection fraction of at least 40 percent gave informed consent. The study group consisted of the ten patients who had a cardiac index < or = 2.5 L/min/m2 (while receiving no inotropic medication) immediately after separation from cardiopulmonary bypass. INTERVENTIONS AND MEASUREMENTS: Study patients were randomly given a starting dose of either 5 micrograms/kg/min of dobutamine (n = 5) or 2 micrograms/kg/min of dopexamine (n = 5). During the initial 30 min following separation from bypass, dosages were titrated incrementally to maintain cardiac index > or = 3.0/L/min/m2. Further titrations of the drug were done only if cardiac index fell below 3.0 L/min/m2 or if sustained tachycardia occurred during the 24-h study period. Data were collected at 5- and 10-min intervals for the first 30 min after separation from bypass, hourly for the next 8 h, then every 2 h for the remainder of the study period. RESULTS: Both drugs increased cardiac index by more than 50 percent over baseline (dobutamine 2.2 +/- 0.1 to 3.5 +/- 0.2 [p < 0.05]; dopexamine, 2.3 +/- 0.1 to 3.5 +/- 0.1 [p < 0.05] L/min/m2). The mean dose required to maintain cardiac index > or = 3.0L/min/m2 was 1.5 micrograms/kg/min for dopexamine and 3.5 micrograms/kg/min for dobutamine. There were no significant differences in either urinary output or net sodium excretion in the dopexamine group compared with the dobutamine group, and tachycardia (heart rate > 120 beats/min) was more common in the dopexamine group. CONCLUSIONS: Our study demonstrates that dopexamine produces hemodynamic, diuretic, and natriuretic effects similar to dobutamine in patients with reduced cardiac index following CABG.

L45 ANSWER 8 OF 32 MEDLINE
ACCESSION NUMBER: 94260081 MEDLINE
DOCUMENT NUMBER: 94260081 PubMed ID: 8201223
TITLE: The effect of propranolol on portal perfusion in patients with alcoholic cirrhosis having distal splenorenal shunt.
COMMENT: Comment in: J Hepatol. 1994 Jan;20(1):3-4
AUTHOR: Gilmore G T; Henderson J M; Mackay G; Galloway J R
CORPORATE SOURCE: Department of Surgery, Emory University School of Medicine, Atlanta, GA.
CONTRACT NUMBER: MO1 RR 00039 (NCRR)
RO1 DK 41571 (NIDDK)
SOURCE: JOURNAL OF HEPATOLOGY, (1994 Jan) 20 (1) 5-10.
Journal code: 8503886. ISSN: 0168-8278.
PUB. COUNTRY: Denmark
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940714
Last Updated on STN: 19940714
Entered Medline: 19940701

AB This study tested the hypothesis that reduction in the hyperdynamic systemic circulation with propranolol in patients with alcoholic cirrhosis and distal splenorenal shunt would lead to improved maintenance of portal perfusion. After standard distal splenorenal shunt, 50-75% of patients with alcoholic cirrhosis lose portal flow in 6-12 months: this is associated with an increased hyperdynamic systemic circulation. Twelve patients with alcoholic cirrhosis with distal splenorenal shunt received propranolol in a dose sufficient to provide beta blockade. Pulse was reduced by 25%, cardiac output reduced by 32% and hepatic venous pressure gradient reduced by 15% ($p < 0.05$). These significant hemodynamic changes with propranolol did not lead to any improvement in the maintenance of portal perfusion: overall, 66% of patients lost prograde portal flow within 1 year. We conclude that the hyperdynamic systemic circulation is not the primary mediator of loss of portal perfusion in this group of patients. Rather, it appears that differences in either intrahepatic resistance or collateral pathway (portal vein to shunt) resistance must account for the different patterns or maintenance of portal perfusion after distal splenorenal shunt.

L45 ANSWER 9 OF 32 MEDLINE
ACCESSION NUMBER: 94260077 MEDLINE
DOCUMENT NUMBER: 94260077 PubMed ID: 7911137
TITLE: Shunt surgery and beta-blockers.
COMMENT: Comment on: J Hepatol. 1994 Jan;20(1):5-10
AUTHOR: Bosch J
CORPORATE SOURCE: Hepatic Haemodynamic Laboratory, Hospital Clinic i Provincial, University of Barcelona, Spain.
SOURCE: JOURNAL OF HEPATOLOGY, (1994 Jan) 20 (1) 3-4.
Journal code: 8503886. ISSN: 0168-8278.
PUB. COUNTRY: Denmark
Commentary
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940714
Last Updated on STN: 19950206
Entered Medline: 19940701

L45 ANSWER 10 OF 32 MEDLINE
ACCESSION NUMBER: 94120797 MEDLINE
DOCUMENT NUMBER: 94120797 PubMed ID: 7904788
TITLE: [Effect of dopexamine on the hemodynamics of coronary surgery patients with and without bisoprolol blockade]. Der Einfluss von Dopexamin auf die Hamodynamik koronarchirurgischer Patienten mit und ohne Bisoprolol-Blockade.
AUTHOR: Gunnicker M; Freund U; Grebe E J; Scherer R; Schieffer M; Zerkowski H R; Hess W
CORPORATE SOURCE: Institut fur Anasthesiologie, Universitatsklinikum der Gesamthochschule Essen.
SOURCE: ZEITSCHRIFT FUR KARDIOLOGIE, (1993 Nov) 82 (11) 729-36.
Journal code: 0360430. ISSN: 0300-5860.

PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199402
ENTRY DATE: Entered STN: 19940312
Last Updated on STN: 19950206
Entered Medline: 19940224

AB Patients with coronary artery disease undergoing coronary artery bypass grafting can develop perioperative low cardiac output failure requiring positive inotropic support. Commonly, the sympathetic amines, dopamine, dobutamine or adrenaline are used in low-output state. However, patients on long-term cardioselective beta-blocking therapy may experience problems with such a treatment. Dopexamine, a new synthetic amine, possesses positive inotropic effects by indirect stimulation of the beta 1-receptors and direct stimulation of the beta 2-receptors. We therefore studied the hemodynamic efficacy of dopexamine in patients with and without beta-receptor blockade. In 12 patients with coronary artery disease classed as NYHA II or III, six without any beta-blocker medication, and six with beta 1-blocker medication (bisoprolol 5 mg), anesthesia was induced with high-dose fentanyl (0.05 mg/kg) and pancuronium (0.1 mg/kg). The patients were normoventilated with a mask (O2:air 1:1, tidal volume 10 ml/kg with a rate of 10/min) for 5 min and then intubated. Following intubation anesthesia was continued with 0.025 mg/kg/h fentanyl. In anesthesia steady state the patients of both groups were treated with 2 micrograms/kg/min dopexamine over a period of 15 min and then with 4 micrograms/kg/min dopexamine over a further period of 15 min. Measurements of cardiovascular dynamics included heart rate (HR), cardiac index (CI), stroke volume index (SVI), mean arterial blood pressure (MAP), coronary perfusion pressure (CPP), systemic vascular resistance (SVR), pulmonary artery pressure (PAP), pulmonary capillary wedge pressure (PCWP), right atrium pressure (RAP), pressure work index (PWI) and arterial-mixed venous oxygen content difference (AVDO2), which were monitored or calculated by standard formulas.(ABSTRACT TRUNCATED AT 250 WORDS)

L45 ANSWER 11 OF 32 MEDLINE
ACCESSION NUMBER: 94017775 MEDLINE
DOCUMENT NUMBER: 94017775 PubMed ID: 7692166
TITLE: Administration of nebivolol after coronary artery bypass in patients with altered left ventricular function.
AUTHOR: Goldstein M; Vincent J L; De Smet J M; Barvais L; Van Nueten L; Scheijgrond H; d'Hollander A; Leclerc J L; Kahn R J
CORPORATE SOURCE: Erasme University Hospital, Free University of Brussels, Belgium.
SOURCE: JOURNAL OF CARDIOVASCULAR PHARMACOLOGY, (1993 Aug) 22 (2) 253-8.
Journal code: 7902492. ISSN: 0160-2446.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199311
ENTRY DATE: Entered STN: 19940117
Last Updated on STN: 19960129
Entered Medline: 19931116

AB This prospective, double-blind study used invasive monitoring and echo-Doppler techniques to compare the hemodynamic effects of nebivolol, a new beta 1-selective beta-blocking agent with those of atenolol in patients recovering from coronary artery bypass grafting surgery. Five milligrams nebivolol and 50 mg atenolol equally decreased heart rate (HR) and blood pressure (BP) but, nebivolol, in contrast to atenolol, caused no decrease in stroke index (SI), cardiac index (CI), and right ventricular ejection fraction (RVEF). These differences appeared to be related in part to different peripheral effects of the two agents because nebivolol administration was associated with a reduction in systemic vascular resistance (SVR). After < or = 10 days of treatment, acceleration of aortic flow velocity increased and isovolumic relaxation time decreased with nebivolol but not with atenolol treatment. Both drugs were equally well tolerated. Therefore, nebivolol shares most of its effects with classical beta 1-blockers but is devoid of the potentially harmful effects on cardiac output (CO) and peripheral resistance.

L45 ANSWER 12 OF 32 MEDLINE
ACCESSION NUMBER: 93377229 MEDLINE
DOCUMENT NUMBER: 93377229 PubMed ID: 8103611
TITLE: Oral sotalol reduces the incidence of atrial fibrillation after coronary artery bypass surgery.
AUTHOR: Nystrom U; Edvardsson N; Berggren H; Pizzarelli G P; Radegran K
CORPORATE SOURCE: Division of Thoracic and Cardiovascular Surgery, Sahlgren's University Hospital, Goteborg, Sweden.
SOURCE: THORACIC AND CARDIOVASCULAR SURGEON, (1993 Feb) 41 (1) 34-7.
Journal code: 7903387. ISSN: 0171-6425.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199310
ENTRY DATE: Entered STN: 19931022
Last Updated on STN: 19950206
Entered Medline: 19931005

AB Episodes of atrial fibrillation or flutter frequently complicate the postoperative course after coronary bypass surgery. A hundred and one patients undergoing coronary artery bypass surgery were randomized to oral pre- and postoperative treatment with sotalol, a non-selective beta-blocking agent with class-III antiarrhythmic properties (50 patients), or to half the preoperative beta-blocking dose according to the routine of the department (51 patients). Thus, there was no equipotency regarding beta blockade in the two groups. The incidence of atrial fibrillation was 10% in the sotalol group and 29% in the comparison group, p = 0.028. In 10% of the sotalol patients the dose had to be reduced or stopped compared to in none the group given routine treatment. The patients who developed atrial fibrillation were older, but otherwise there was no statistically significant difference between the two groups. Sotalol was effective in reducing the incidence of atrial fibrillation. However, careful titration of the optimal dose should be performed in order to avoid side effects of the beta blockade.

L45 ANSWER 13 OF 32 MEDLINE
ACCESSION NUMBER: 93124892 MEDLINE

DOCUMENT NUMBER: 93124892 PubMed ID: 1282600
TITLE: Cardiac microdialysis measurement of extracellular adenine nucleotide breakdown products during regional ischemia and reperfusion in canine heart: protective effect of propranolol against reperfusion injury.
AUTHOR: Kuzmin A I; Tskitishvili O V; Serebryakova L I; Saprygina T V; Kapelko V I; Medvedev O S
CORPORATE SOURCE: Institute of Experimental Cardiology, USSR Cardiology Research Center, Moscow.
SOURCE: JOURNAL OF CARDIOVASCULAR PHARMACOLOGY, (1992 Dec) 20 (6) 961-8.
Journal code: 7902492. ISSN: 0160-2446.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199302
ENTRY DATE: Entered STN: 19930226
Last Updated on STN: 19960129
Entered Medline: 19930211

AB Using cardiac microdialysis, we studied release of the adenine nucleotide breakdown products (ANBP) adenosine (ADS), inosine (INS), and hypoxanthine (HYP) into the interstitium of canine myocardium during 20- and 40-min occlusion of the anterior descending coronary artery and reperfusion. Dialysate ANBP concentrations reached maximum values not at the end of ischemia but in the first 10 min of reperfusion. The effect was more pronounced after 20-min ischemia. Further reperfusion led to an ANBP decrease that was more prolonged after 40-min ischemia. Pretreatment with DL-propranolol (0.5 mg/kg, intravenously, i.v.) given 40 min before coronary occlusion had no effect on adenine nucleotide catabolism rate during 20- and 40-min ischemia, but it facilitated washout of ANBP from ischemic zone immediately after the start of reperfusion. A similar effect was elicited by a D-stereoisomer of propranolol with no beta-adrenoceptor blocking activity. Results suggest that the reperfusion injury and probably the no-reflow phenomenon were the cause of enhanced adenine nucleotide catabolism at the beginning of reperfusion and prolonged ANBP washout from the ischemic zone. Reduction of reperfusion injury by propranolol could be related to the membrane stabilizing and antioxidant activity of this agent. Examination of DL-propranolol kinetics in arterial and coronary venous blood plasma showed that drug accumulation in the myocardium was almost maximum at the start of ischemia; therefore, the efficiency of cardio-protection with DL-propranolol was not limited by pharmacokinetic causes. Insertion of an additional microdialysis probe in the myocardium allowed monitoring of extracellular propranolol concentrations.

L45 ANSWER 14 OF 32 MEDLINE
ACCESSION NUMBER: 92085293 MEDLINE
DOCUMENT NUMBER: 92085293 PubMed ID: 1684206
TITLE: Preservation of membrane phospholipids by propranolol, pindolol, and metoprolol: a novel mechanism of action of beta-blockers.
AUTHOR: Liu X K; Engelman R M; Agrawal H R; Das D K
CORPORATE SOURCE: Department of Surgery, University of Connecticut School of Medicine, Farmington 06010.
CONTRACT NUMBER: HL22559 (NHLBI)
HL33889 (NHLBI)
HL34360 (NHLBI)

SOURCE: JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY, (1991 Oct) 23 (10) 1091-100.
Journal code: 0262322. ISSN: 0022-2828.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199201
ENTRY DATE: Entered STN: 19920209
Last Updated on STN: 19950206
Entered Medline: 19920121

AB In this study, we examined the effects of three different beta-blockers, propranolol, pindolol, and metoprolol, on membrane phospholipid preservation in the ischemic and reperfused rat heart. Isolated rat hearts were perfused with Krebs-Henseleit bicarbonate buffer by the Langdendorff technique in the presence or absence of propranolol, pindolol, or metroprolol (20 microM each) for 15 mins at 37 degrees C. Hearts where then either made ischemic alone at 37 degrees C for 30 mins, or followed by 30 mins of reperfusion. Coronary flow and perfusate creatine kinase content were monitored during both pre- and post-ischemic periods. At the end of the experiment, hearts were frozen by freeze-clamping at liquid nitrogen temperature. Membrane phospholipids, fatty acid composition of these phospholipids, non-esterified free fatty acids, and myocardial thiobabituric acid (TBA) reactive product were examined in these hearts. The beta-blocker-treated hearts exhibited significantly less lipid peroxidation than the control hearts (P less than 0.05), as indicated by decreased formation of TBA reactive product and the higher percentage of unsaturated fatty acids in the phosphatidylcholine (PC) in heart. In addition, compared to the control group, less accumulation of free fatty acids was observed in the propranolol and pindolol treated groups. Finally, reduced myocardial creatine kinase release and enhanced recovery of coronary flow indicated significant myocardial preservation by these beta-blockers. The efficacy of these beta-blockers were in the following order: propranolol, pindolol, metoprolol. These results suggest that beta-blockers could also protect an ischemic heart from reperfusion injury by preserving the membrane phospholipids.

L45 ANSWER 15 OF 32 MEDLINE
ACCESSION NUMBER: 90378899 MEDLINE
DOCUMENT NUMBER: 90378899 PubMed ID: 2399780
TITLE: A comparison of the hemodynamic effects of labetalol and sodium nitroprusside in patients undergoing carotid endarterectomy.
AUTHOR: Geniton D J
SOURCE: AANA JOURNAL, (1990 Aug) 58 (4) 281-7.
Journal code: 0431420. ISSN: 0094-6354.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Nursing Journals
ENTRY MONTH: 199010
ENTRY DATE: Entered STN: 19901122
Last Updated on STN: 19950206
Entered Medline: 19901018

AB The hemodynamic effects of labetalol and sodium nitroprusside were compared in 19 subjects who became hypertensive at the conclusion of

elective carotid endarterectomy. Following randomization and standard anesthetic protocol, treatment was administered when blood pressure exceeded 160 mmHg systolic or 90 mmHg diastolic at the conclusion of surgery. Group 1 subjects (n = 9) received 0.25 mg/kg labetalol in divided doses, followed by repeat doses of 0.50 mg/kg until blood pressure was less than 160/90 mmHg or until they had received 300 mg total dose. Group 2 subjects (n = 10) were started on a nitroprusside infusion at 0.5 micrograms/kg/min, titrated to achieve blood pressure less than 160/90 mmHg, or up to a rate of 6.0 micrograms/kg/min. Data were collected at 15-minute intervals for 12 hours. Analysis with repeated measures analysis of covariance (p less than 0.05) found no significant differences between groups in any measured parameter. A significant time effect was found for both groups. The results suggest that labetalol is an effective alternative to nitroprusside for the management of postoperative hypertension in this patient population. For the majority of such patients, labetalol may be the drug of choice for postendarterectomy hemodynamic control.

L45 ANSWER 16 OF 32 MEDLINE
ACCESSION NUMBER: 90298472 MEDLINE
DOCUMENT NUMBER: 90298472 PubMed ID: 1972911
TITLE: A comparison of diltiazem, esmolol, nifedipine and nitroprusside therapy of post-CABG hypertension.
AUTHOR: Boylan J F; O'Leary G; Weisel R D; Ivanov J; Mickle D A; Teasdale S J
CORPORATE SOURCE: Department of Anaesthesia, Toronto General Hospital, University of Toronto, Ontario.
SOURCE: CANADIAN JOURNAL OF ANAESTHESIA, (1990 May) 37 (4 Pt 2) S156.
Journal code: 8701709. ISSN: 0832-610X.
PUB. COUNTRY: Canada
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199008
ENTRY DATE: Entered STN: 19900907
Last Updated on STN: 19950206
Entered Medline: 19900806

L45 ANSWER 17 OF 32 MEDLINE
ACCESSION NUMBER: 90072706 MEDLINE
DOCUMENT NUMBER: 90072706 PubMed ID: 2686494
TITLE: Intravenous labetalol versus sodium nitroprusside for treatment of hypertension postcoronary bypass surgery.
AUTHOR: Cruise C J; Skrobik Y; Webster R E; Marquez-Julio A; David T E
CORPORATE SOURCE: Department of Anesthesia, Toronto Western Hospital, Ontario, Canada.
SOURCE: ANESTHESIOLOGY, (1989 Dec) 71 (6) 835-9.
Journal code: 1300217. ISSN: 0003-3022.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals

ENTRY MONTH: 199001
ENTRY DATE: Entered STN: 19900328
Last Updated on STN: 19900328
Entered Medline: 19900102

AB Hypertension is common following coronary artery bypass surgery. The safety of labetalol, a recently released combined alpha-1 and beta-adrenergic blocking agent for treatment of hypertension in this clinical situation is controversial. The authors compared the hemodynamic effects of labetalol with those of sodium nitroprusside (SNP) in 91 patients with good left ventricular function and equally severe coronary artery disease and in whom coronary artery bypass surgery had been just completed. They were anesthetized using fentanyl, diazepam, and enflurane. If hypertension developed postoperatively, patients were randomized to receive labetalol, 2 mg/min to a maximum of 300 mg (20 patients) or sodium nitroprusside in 0.5 micrograms.kg-1.min-1 increments by infusion (20 patients) to return blood pressure to normal. Compared with control values, labetalol brought about significant (P less than 0.05) reductions in heart rate, and cardiac index. No change was noted in stroke volume or systemic vascular resistance, but slight increases were found in central venous pressure and pulmonary capillary wedge pressure. Sodium nitroprusside treatment caused significant increases in heart rate and cardiac index while reducing diastolic blood pressure, central venous pressure, and pulmonary capillary wedge pressure. Stroke volume remained unchanged. Following the study period, blood pressure was controlled in all patients with SNP. Total doses of SNP in the 16 h following the study period were significantly less in the labetalol group (46.6 +/- 11.7 mg) versus (116.1 +/- 10.3 mg) in the SNP group (P less than 0.05). In this clinical circumstance, labetalol can be safe and effective for controlling hypertension, but its mechanism of achieving this effect varies from that for sodium nitroprusside.(ABSTRACT TRUNCATED AT 250 WORDS)

L45 ANSWER 18 OF 32 MEDLINE
ACCESSION NUMBER: 89304406 MEDLINE
DOCUMENT NUMBER: 89304406 PubMed ID: 2743552
TITLE: The safety of cumulative doses of labetalol in perioperative hypertension.
AUTHOR: Cosentino F; Vidt D G; Orlowski J P; Shiesley D; Little J R
SOURCE: CLEVELAND CLINIC JOURNAL OF MEDICINE, (1989 Jun) 56 (4) 371-6.
Journal code: 8703441. ISSN: 0891-1150.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19900309
Entered Medline: 19890825

AB Intravenous labetalol is commonly used in the management of hypertensive emergencies or urgencies as well as postoperative hypertension. The maximum recommended dose in any clinical setting is 300 mg in 24 hours. The safety of administering high doses of intravenous labetalol (greater than 300 mg in 24 hours) was evaluated in neurosurgical patients (n = 9). During 15 distinct periods of 24 hours or less, the mean dose of labetalol given was 623 +/- 86 mg. Adverse hemodynamic and biochemical effects were minor and easily reversible. Intravenous labetalol can safely be used in doses exceeding 300 mg per 24 hours in neurosurgical patients.

L45 ANSWER 19 OF 32 MEDLINE
ACCESSION NUMBER: 88166089 MEDLINE
DOCUMENT NUMBER: 88166089 PubMed ID: 2894920
TITLE: Esmolol: safety and efficacy in postoperative cardiothoracic patients with supraventricular tachyarrhythmias.
AUTHOR: Schwartz M; Michelson E L; Sawin H S; MacVaugh H 3rd
CORPORATE SOURCE: Lankenau Hospital, Philadelphia 19151.
CONTRACT NUMBER: K08 HL01312 (NHLBI)
SOURCE: CHEST, (1988 Apr) 93 (4) 705-11.
Journal code: 0231335. ISSN: 0012-3692.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198805
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19880510

AB Esmolol, an intravenous, ultrashort-acting beta-blocker, was studied for its ability to safely control supraventricular arrhythmias up to 24 hours in 15 postoperative cardiothoracic surgery patients with atrial fibrillation or flutter and rapid ventricular response. Esmolol obtained an initial therapeutic response in nine (60 percent) patients. Mean heart rate for the 15 patients was reduced from 139 +/- 12 beats/min before therapy to 106 +/- 21 beats/min during esmolol infusion (p less than 0.01). The mean time to a therapeutic response after initiation of therapy, using a multistep titration regimen (500 micrograms/kg/min loading infusions over one minute, prior to incremental titration steps from 50 to 300 micrograms/kg/min over 4 to 14 minutes), was 22 +/- 9 minutes, and therapy was continued for 17 +/- 9 hours in responders. Esmolol significantly lowered blood pressure in the group studied and resulted in mild supine or orthostatic hypotension in ten (67 percent) patients. Side effects, including hypotension (10/15 patients), gastrointestinal disturbances (2/15), and weakness or somnolence (6/15), were transient and were not associated with serious clinical sequelae. We conclude that esmolol is effective for rate control in a majority of postoperative cardiothoracic surgery patients with atrial fibrillation or flutter. Side effects, although mild, occur relatively frequently, limiting prolonged infusions and warranting close surveillance of patients.

L45 ANSWER 20 OF 32 MEDLINE
ACCESSION NUMBER: 88152013 MEDLINE
DOCUMENT NUMBER: 88152013 PubMed ID: 3257915
TITLE: The use of atenolol in the prevention of supraventricular arrhythmias following coronary artery surgery.
AUTHOR: Lamb R K; Prabhakar G; Thorpe J A; Smith S; Norton R; Dyde J A
CORPORATE SOURCE: Walsgrave Hospital, Coventry, U.K.
SOURCE: EUROPEAN HEART JOURNAL, (1988 Jan) 9 (1) 32-6.
Journal code: 8006263. ISSN: 0195-668X.
PUB. COUNTRY: ENGLAND: United Kingdom
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 198804
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19950206
Entered Medline: 19880411

AB Sixty patients undergoing coronary artery bypass surgery were studied prospectively in order to investigate the effect of a cardioselective beta-blocker on the incidence of postoperative supraventricular arrhythmias. Patients with good left ventricular function were randomly divided into two groups: 30 patients treated with atenolol and 30 patients acting as controls. Atrial fibrillation was seen in 11 patients and frequent premature atrial extrasystoles were noted in one. Eleven (37%) patients in the control group experienced arrhythmias whilst atenolol significantly reduced this incidence to 3% (one patient), P = 0.001. There was no significant relationship between the development of supraventricular arrhythmias and the following variables: age, sex, severity of preoperative symptoms, previous myocardial infarction, extent of coronary artery disease, technique of myocardial preservation used, ischaemic time, number and site of saphenous vein grafts, endarterectomies performed and perioperative serum potassium levels. It is concluded that the use of atenolol (started 72 h before operation) is effective in reducing the incidence of supraventricular arrhythmias following elective coronary artery bypass operations in patients with good left ventricular function.

L45 ANSWER 21 OF 32 MEDLINE
ACCESSION NUMBER: 87302169 MEDLINE
DOCUMENT NUMBER: 87302169 PubMed ID: 3621532
TITLE: The hemodynamics of beta-blockade in patients undergoing abdominal aortic aneurysm repair.
AUTHOR: Pasternack P F; Imparato A M; Baumann F G; Laub G; Riles T S; Lamparello P J; Grossi E A; Berguson P; Becker G; Bear G
SOURCE: CIRCULATION, (1987 Sep) 76 (3 Pt 2) III1-7.
Journal code: 0147763. ISSN: 0009-7322.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198710
ENTRY DATE: Entered STN: 19900305
Last Updated on STN: 19900305
Entered Medline: 19871006

AB To assess the intraoperative and postoperative hemodynamic effects of beta-blockade and its benefits in limiting myocardial ischemia and infarction, a group of 32 patients scheduled for abdominal aortic aneurysm (AAA) surgery (group 1) was treated with oral metoprolol immediately before surgery and with intravenous metoprolol during the postoperative period. Mean age was 71 years, and mean ejection fraction was 56% (range 36% to 83%). Eight patients had a preoperative history of angina, 13 had a history of myocardial infarction, and five had electrocardiographic evidence of prior myocardial infarction. A group of 51 closely matched patients with AAA who did not receive metoprolol served as controls (group 2). In group 1, overall hemodynamic tolerance of metoprolol intraoperatively and postoperatively was good, and there was no incidence of congestive heart failure, hypotension, or asthma. Furthermore, in group 1 significant reduction of systolic blood pressure and heart rate was consistently noted at frequent intraoperative intervals and for 48 hr after surgery, with only a transient reduction of cardiac index. In group

1, only one patient (3%) suffered an acute myocardial infarction. In contrast, nine group 2 patients (18%; p less than .05) suffered perioperative myocardial infarction. Furthermore, only four (12.5%) group 1 patients developed significant cardiac arrhythmias as opposed to 29 group 2 patients (56.9%; p less than .001). These data demonstrate that beta-blockade with metoprolol is effective in controlling systolic blood pressure and heart rate both intraoperatively and postoperatively in patients undergoing repair of AAA and can significantly reduce the incidence of perioperative myocardial infarction and arrhythmias.

L45 ANSWER 22 OF 32 MEDLINE
ACCESSION NUMBER: 87153142 MEDLINE
DOCUMENT NUMBER: 87153142 PubMed ID: 2881481
TITLE: Comparison of esmolol and nitroprusside for acute post-cardiac surgical hypertension.
AUTHOR: Gray R J; Bateman T M; Czer L S; Conklin C; Matloff J M
SOURCE: AMERICAN JOURNAL OF CARDIOLOGY, (1987 Apr 1) 59 (8) 887-91. Journal code: 0207277. ISSN: 0002-9149.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198704
ENTRY DATE: Entered STN: 19900303
Last Updated on STN: 19980206
Entered Medline: 19870423

AB Because acute systemic hypertension early after cardiac surgery has been linked to catecholamine elevation, an open-label, randomized, crossover study was performed to compare the efficacy of esmolol, a new ultra-short-acting intravenous beta-blocking agent, to nitroprusside, the standard therapy. Controlled drug infusions to maximal dosage (esmolol, 300 micrograms/kg/min, and nitroprusside, 10 micrograms/kg/min) were titrated to achieve at least a 15% reduction in systolic pressure. The blood pressure (BP) endpoint was achieved with esmolol (within 29 +/- 14 minutes) in 18 of 20 patients (90%), compared with 19 of 20 (95%) with nitroprusside infusion (within 21 +/- 15 minutes, difference not significant [NS]). Systolic BP decreased from 170 +/- 13 to 136 +/- 12 mm Hg (mean +/- standard deviation) with esmolol and from 170 +/- 13 to 141 +/- 13 mm Hg with nitroprusside infusion (both p less than 0.05). Diastolic BP was reduced from 71 +/- 12 to 64 +/- 11 mm Hg with esmolol and from 71 +/- 12 to 52 +/- 13 mm Hg with nitroprusside infusion (both p less than 0.05). Esmolol infusion resulted in decreased heart rate, cardiac index and stroke volume index and increased right atrial pressure (all p less than 0.05), whereas nitroprusside infusion resulted in increased heart rate and cardiac index and decreased right atrial pressure, pulmonary arterial wedge pressure and systemic vascular resistance (p less than 0.05).(ABSTRACT TRUNCATED AT 250 WORDS)

L45 ANSWER 23 OF 32 MEDLINE
ACCESSION NUMBER: 87045842 MEDLINE
DOCUMENT NUMBER: 87045842 PubMed ID: 3535474
TITLE: Prevention of atrial fibrillation or flutter by acebutolol after coronary bypass grafting.
AUTHOR: Daudon P; Corcos T; Gandjbakhch I; Levasseur J P; Cabrol A; Cabrol C
SOURCE: AMERICAN JOURNAL OF CARDIOLOGY, (1986 Nov 1) 58 (10) 933-6.

Journal code: 0207277. ISSN: 0002-9149.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198612
ENTRY DATE: Entered STN: 19900302
Last Updated on STN: 19950206
Entered Medline: 19861209

AB Supraventricular tachyarrhythmias are common after coronary artery bypass graft surgery (CABG) and may have deleterious hemodynamic consequences. To determine if acebutolol, a cardioselective beta-blocking drug, prevents such tachyarrhythmias after CABG, 100 consecutive patients, aged 30 to 77 years (mean +/- standard deviation 53 +/- 9), were entered into a randomized, controlled study. Exclusion criteria were: contraindications to beta-blocking drugs, left ventricular aneurysm, major renal failure, history of cardiac arrhythmia and cardiac arrhythmia during the immediate postoperative period. From 36 hours after surgery until discharge (usually on the seventh day), 50 patients were given 200 mg of acebutolol (or 400 mg if weight was more than 80 kg) orally twice a day (dosage than modified to maintain a heart rate at rest between 60 and 90 beats/min). The 50 patients in the control group did not receive beta-blocking drugs after CABG. The 2 groups were comparable in angina functional class, ejection fraction, number of diseased vessels, antianginal therapy before CABG, number of bypassed vessels and duration of cardiopulmonary bypass All patients were clinically evaluated twice daily and had continuous electrocardiographic monitoring and daily electrocardiograms. A 24-hour continuous electrocardiogram was recorded in the last 20 patients.(ABSTRACT TRUNCATED AT 250 WORDS)

L45 ANSWER 24 OF 32 MEDLINE
ACCESSION NUMBER: 85252367 MEDLINE
DOCUMENT NUMBER: 85252367 PubMed ID: 3893488
TITLE: Intravenous sotalol for the treatment of atrial fibrillation and flutter after cardiopulmonary bypass. Comparison with disopyramide and digoxin in a randomised trial.
AUTHOR: Campbell T J; Gavaghan T P; Morgan J J
SOURCE: BRITISH HEART JOURNAL, (1985 Jul) 54 (1) 86-90.
Journal code: 0370634. ISSN: 0007-0769.
PUB. COUNTRY: ENGLAND: United Kingdom
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198508
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19950206
Entered Medline: 19850828

AB The efficacy of sotalol in treating acute atrial fibrillation and flutter after open heart surgery was compared with that of a digoxin/disopyramide combination. Forty adult patients with postoperative atrial arrhythmias were randomised into either group 1 (sotalol 1 mg/kg bolus intravenously plus 0.2 mg/kg intravenously over 12 hours) or group 2 (digoxin 0.75 mg intravenously, then two hours later disopyramide 2 mg/kg intravenous bolus

and 0.4 mg/kg/h intravenously for 10 hours). In each group, 17 out of 20 patients reverted to sinus or junctional rhythm within 12 hours. The time to reversion in group 1 was significantly shorter than in group 2. Systolic blood pressure fell by greater than or equal to 20 mm Hg or to less than or equal to 90 mm Hg during drug administration in 17 out of 20 patients in group 1 (sotalol withdrawn in two) and in none out of 20 in group 2. Two patients in group 1 developed transient bradycardia (sotalol withdrawn in one). None of 17 patients in group 1 and two of 17 in group 2 relapsed temporarily into atrial fibrillation during the 12 hours of intravenous treatment. On continued oral treatment, one late relapse occurred in group 1 and five in group 2, and five patients in group 2 had disopyramide withdrawn because of anticholinergic side effects (acute urinary retention in four). Sotalol was as effective as the digoxin/disopyramide combination and acted significantly faster. Sensitivity to beta blockade in these patients may be related to high plasma catecholamine concentrations known to occur after cardiopulmonary bypass.

L45 ANSWER 25 OF 32 MEDLINE
ACCESSION NUMBER: 85208813 MEDLINE
DOCUMENT NUMBER: 85208813 PubMed ID: 2860148
TITLE: Esmolol: a new ultrashort-acting beta-adrenergic blocking agent for rapid control of heart rate in postoperative supraventricular tachyarrhythmias.
AUTHOR: Gray R J; Bateman T M; Czer L S; Conklin C M; Matloff J M
SOURCE: JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY, (1985 Jun) 5 (6) 1451-6.
Journal code: 8301365. ISSN: 0735-1097.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198507
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19980206
Entered Medline: 19850710

AB Prompt control of heart rate is important for successful treatment of supraventricular tachyarrhythmias early after open heart surgery when sympathetic tone is high and ventricular response rates may be rapid. Esmolol, a new ultrashort-acting (9 minute half-life) beta-receptor blocking agent, was given by continuous intravenous infusion for up to 24 hours in 24 patients (21 with isolated coronary bypass surgery and 3 with valve replacement) 1 to 7 days after surgery. Atrial fibrillation was present in 9 patients, atrial flutter in 2 and sinus tachycardia in 13. Eleven patients had received intravenous digoxin (average dose 0.6 mg, average serum level 1.19 mg/100 ml) before esmolol infusion without adequate control of the supraventricular tachyarrhythmia. After a 1 minute loading infusion of esmolol (500 micrograms/kg per min), maintenance dose, titrated to heart rate and blood pressure response, varied from 25 to 300 micrograms/kg per min. After esmolol administration, at an average dose of 139 +/- 83 micrograms/kg per min, mean heart rate decreased from 130 +/- 15 to 99 +/- 15 beats/min. Within 5 to 18 minutes after initiation of therapy, all patients had achieved a 15% reduction in heart rate at a maintenance dose of 150 micrograms/kg per min or less. A 20% reduction in heart rate was attained in 19 of the 24 patients, and conversion to sinus rhythm occurred during esmolol infusion in 5 of the 11 patients with atrial flutter or fibrillation. Transient asymptomatic hypotension (less than 90/50 mm Hg) was seen in 13 patients, requiring cessation of esmolol

therapy in 2.(ABSTRACT TRUNCATED AT 250 WORDS)

L45 ANSWER 26 OF 32 MEDLINE
ACCESSION NUMBER: 84176588 MEDLINE
DOCUMENT NUMBER: 84176588 PubMed ID: 6143520
TITLE: Heart block after coronary artery bypass--effect of chronic administration of calcium-entry blockers and beta-blockers.
AUTHOR: Henling C E; Slogoff S; Kodali S V; Arlund C
SOURCE: ANESTHESIA AND ANALGESIA, (1984 May) 63 (5) 515-20. Journal code: 1310650. ISSN: 0003-2999.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198405
ENTRY DATE: Entered STN: 19900319
Last Updated on STN: 19950206
Entered Medline: 19840515

AB We evaluated risk of heart block after cardiopulmonary by-pass (CPB) in patients with normal conduction undergoing coronary artery bypass grafting who chronically received calcium-entry blockers, beta-blockers, or combined therapy. Before CPB, calcium-entry blockers alone produced an increase in P-R intervals but no change in heart rate; calcium-entry blocker effects were undetectable after CPB, beta-Blockers alone or with calcium-entry blockers produced lower heart rates and longer P-R intervals throughout the entire perioperative period when compared to no therapy (control) or calcium-entry blockers alone. Complete heart block did not occur; one control patient had transient second degree block after CPB. First degree block appeared transiently in 5% of the patients after anesthetic induction and in 15% on emergence from CPB, but was unrelated to drug therapy. We conclude that chronic calcium-entry blocker therapy has minimal effects on conduction perioperatively; beta-blocker effects persist for up to 10 hr after CPB; and the risk of heart block with either drug or combination is low and should not be a factor in their continued administration preoperatively.

L45 ANSWER 27 OF 32 MEDLINE
ACCESSION NUMBER: 83203396 MEDLINE
DOCUMENT NUMBER: 83203396 PubMed ID: 6601941
TITLE: Continued propranolol administration following coronary bypass surgery. Antiarrhythmic effects.
AUTHOR: Abel R M; van Gelder H M; Pores I H; Liguori J; Gielchinsky I; Parsonnet V
SOURCE: ARCHIVES OF SURGERY, (1983 Jun) 118 (6) 727-31. Journal code: 9716528. ISSN: 0004-0010.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
(CONTROLLED CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198306
ENTRY DATE: Entered STN: 19900318
Last Updated on STN: 19970203
Entered Medline: 19830623

AB One hundred consecutive patients requiring propranolol hydrochloride before undergoing isolated aortocoronary bypass procedures were examined. In half the patients, propranolol therapy was discontinued, whereas the

other half continued to receive intraoperative and postoperative propranolol regardless of clinical events. Although there were no preoperative differences in the apparent degree of coronary arterial disease or left ventricular function in the two groups, postoperative supraventricular arrhythmias were less frequent in the propranolol-treated group, most noticeably in those receiving less than 320 mg preoperatively. In patients who had received large preoperative doses (greater than or equal to 320 mg/day), there were no significant differences in postoperative supraventricular tachycardias. Continued propranolol therapy following isolated coronary bypass surgery appears to be a safe and efficacious method of decreasing the incidence of postoperative supraventricular tachycardias.

L45 ANSWER 28 OF 32 MEDLINE
ACCESSION NUMBER: 83047350 MEDLINE
DOCUMENT NUMBER: 83047350 PubMed ID: 6982689
TITLE: Arrhythmia prophylaxis using propranolol after coronary artery surgery.
AUTHOR: Williams J B; Stephensen L W; Holford F D; Langer T; Dunkman W B; Josephson M E
SOURCE: ANNALS OF THORACIC SURGERY, (1982 Oct) 34 (4) 435-8. Journal code: 15030100R. ISSN: 0003-4975.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198212
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19821216

AB Sixty patients undergoing coronary artery bypass grafting operations with cold potassium cardioplegia as the method of myocardial preservation either received low-dose oral propranolol (10 mg every 6 hours; 28 patients) or served as controls (32 patients). The study period began after extubation and ended at the time of hospital discharge. On the fourth postoperative day, 24-hour Holter monitoring was performed to assess additional subtle differences in arrhythmias. The overall incidence of symptomatic postoperative arrhythmias was 31% in the control group: 6 patients (19%) had atrial fibrillation or flutter and 4 patients (12%), ventricular arrhythmias. By contrast, 1 patient (4%) in the propranolol group had atrial fibrillation, and no patient had ventricular arrhythmias. The difference in overall arrhythmia rates between the two groups is significant (p less than 0.025). Twenty-four-hour Holter monitoring demonstrated no additional differences in the frequency of simple or complex atrial or ventricular ectopy between the two groups. We conclude that the incidence of postoperative arrhythmias following coronary artery bypass operation is diminished by the oral administration of prophylactic low-dose propranolol. When compared with our previous study [1], in which the method of myocardial preservation was intermittent aortic cross-clamping and moderate hypothermia, there is no difference in the overall incidence of postoperative arrhythmias.

L45 ANSWER 29 OF 32 MEDLINE
ACCESSION NUMBER: 82230147 MEDLINE
DOCUMENT NUMBER: 82230147 PubMed ID: 6979982
TITLE: Efficacy of low-dose propranolol in preventing postoperative supraventricular tachyarrhythmias: a prospective, randomized study.

AUTHOR: Silverman N A; Wright R; Levitsky S
SOURCE: ANNALS OF SURGERY, (1982 Aug) 196 (2) 194-7.
Journal code: 0372354. ISSN: 0003-4932.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198208
ENTRY DATE: Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19820826

AB A prospective, randomized study was performed in 100 consecutive patients undergoing coronary artery bypass surgery to assess the efficacy of the early reinstitution of propranolol in reducing the incidence of postoperative supraventricular tachyarrhythmias (SVT). Patients were randomized to receive propranolol 10 mg every 6 hours enterally starting the morning after surgery (Group I, 50 patients) or to serve as controls (Group II, 50 patients). No patient was excluded because of poor ventricular function, need for urgent revascularization, or transient necessity for ionotropic support. Both groups had a comparable incidence of risk factors, previous infarction, unstable angina, and abnormal ventricular function. The extent of coronary disease, preoperative propranolol dose, and number of grafts performed were also similar. SVT occurred in 3/50 (6%) patients in Group I compared with 14/50 (28%) in Group II (p less than 0.01). There were no preoperative or intraoperative discriminators to predict the occurrence of SVT. In addition, perioperative infarction and the need for mechanical or pharmacologic circulatory support did not predispose to SVT. The data indicate that early administration of propranolol should be given to all patients after myocardial revascularization to decrease the incidence of these postoperative rhythm disturbances.

L45 ANSWER 30 OF 32 MEDLINE
ACCESSION NUMBER: 81195920 MEDLINE
DOCUMENT NUMBER: 81195920 PubMed ID: 7015021
TITLE: Prevention of supraventricular tachyarrhythmia with low-dose propranolol after coronary bypass.
AUTHOR: Mohr R; Smolinsky A; Goor D A
SOURCE: JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY, (1981 Jun) 81 (6) 840-5.
Journal code: 0376343. ISSN: 0022-5223.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198107
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19900316
Entered Medline: 19810720

AB Eighty-five patients receiving long-term propranolol therapy were randomized after aorta-coronary bypass grafting either to receive minidose propranolol (Group I) or to serve as controls (Group II). They were compared with 18 patients (Group III) who did not receive beta blocking agents prior to operation but were given propranolol postoperatively.

Poor-risk patients (those having left ventricular aneurysms, low ejection fraction, or congestive heart failure) as well as patients who required catecholamines postoperatively were included in the study. All three groups were comparable with respect to all risk factors. Propranolol (5 to 10 mg/6 hr) was started through a nasogastric tube 6 hours after operation and continued orally in all patients in Groups I and III. Supraventricular tachyarrhythmia appeared in two of 37 patients in Group I (5%), 19 of 48 patients in Group II (40%), and five of 18 patients in Group III (27%). The incidence of supraventricular tachyarrhythmia was significantly lower in Group I than in Groups II and III (p less than 0.001, Group I versus Group II; p less than 0.01, Group I versus Group III). In conclusion, low-dose propranolol is very effective in preventing supraventricular tachyarrhythmia following aorta-coronary bypass in patients receiving beta blockers preoperatively. The increased tendency for postoperative supraventricular tachyarrhythmia to develop in these patients is attributed to hypersensitivity to adrenergic stimulation after propranolol withdrawal. The tachyarrhythmia can be prevented by early reinstitution of propranolol in low doses after the operation.

L45 ANSWER 31 OF 32 MEDLINE
ACCESSION NUMBER: 80129155 MEDLINE
DOCUMENT NUMBER: 80129155 PubMed ID: 6965579
TITLE: Propranolol for prevention of postoperative cardiac arrhythmias: a randomized study.
AUTHOR: Stephenson L W; MacVaugh H 3rd; Tomasello D N; Josephson M E
SOURCE: ANNALS OF THORACIC SURGERY, (1980 Feb) 29 (2) 113-6. Journal code: 15030100R. ISSN: 0003-4975.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 198004
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19800423

AB Two hundred twenty-three patients were randomly selected to receive propranolol, 10 mg orally every 6 hours, or to serve as controls after coronary artery bypass grafting. The study began at the time of discharge from the intensive care unit. Patients were ineligible if they had cardiac arrhythmias while in the intensive care unit, low cardiac output requiring catecholamine support, or bradycardia requiring a pacemaker. In the control group, cardiac arrhythmias for which treatment was necessary developed in 31 of 136 patients (23%), atrial fibrillation or flutter in 24 patients (18%), and ventricular arrhythmias in 7 (5%). In the group receiving propranolol, cardiac arrhythmias requiring treatment developed in 9 of 87 patients (10%), atrial fibrillation or flutter in 7 (8%), and ventricular arrhythmias in 2 (2%). The difference in frequency with which cardiac arrhythmias occurred between the two groups is significantly different (p less than 0.05). We conclude that propranolol is effective in the prevention of cardiac arrhythmias following coronary artery bypass grafting.

L45 ANSWER 32 OF 32 MEDLINE
ACCESSION NUMBER: 74009617 MEDLINE
DOCUMENT NUMBER: 74009617 PubMed ID: 4147613
TITLE: cardiac dysrhythmias during anaesthesia with special reference to practolol (Eraldine).

AUTHOR: Johnstone M
SOURCE: ACTA CARDIOLOGICA, (1972) Suppl 15:293-3.
Journal code: 0370570. ISSN: 0001-5385.
PUB. COUNTRY: Belgium
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197312
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19950206
Entered Medline: 19731215

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FILE 'HOME' ENTERED AT 10:48:38 ON 24 JUN 2002

7951621 EMBASE No: 90389658

Evaluation of intravenous esmolol for treatment of postoperative hypertension

Kataria B.; Dubois M.; Lea D.; Ved S.; Vinayakom K.; Hannallah M.; Gadde P.

Department of Anesthesia, Georgetown University Medical Center, 3800 Reservoir Rd NW, Washington, DC 20007 USA

J. CARDIOTHORACIC ANESTH. (USA) , 1990, 4/5 SUPPL. 2 (13-16) CODEN: JCAAE ISSN: 0888-6296

LANGUAGES: English

SUBFILES: 009; 024; 030

The efficacy and safety of intravenous (IV) esmolol to treat postoperative hypertension was studied in 30 adult patients, during emergence and recovery from anesthesia after general surgery. Esmolol was given as an IV infusion when the patient developed systolic blood pressure (SBP) greater than or equal to 150 mm Hg or diastolic blood pressure (DBP) greater than or equal to 95 mm Hg and heart rate (HR) greater than or equal to 70 beats/min in the recovery room. Patients received a dose ranging from 100 to 2,104 mg of esmolol. Mean duration of the infusion was 63.6 plus or minus 28.3 minutes. There were statistically significant differences between the control measurements and the end of esmolol titration for SBP, DBP, and HR. Side effects such as HR less than 60 beats/min or a decrease in SBP greater than 25% were observed in 33% (10/30) of the patient population; however, these effects were temporary and self-limiting. Hypotension (SBP < 90 mm Hg), bronchospasm, or congestive heart failure were not observed in any of the patients. It is concluded that the ultrashort-acting beta-**adrenergic blocker** esmolol was 90% (27/30) efficacious (ie, at least a 10% decrease in SBP or DBP) in controlling **postoperative** hypertension. As a fast-acting, short-lasting antihypertensive drug, it joins the armamentarium of other drugs in the treatment of **postoperative** hypertension during emergence from anesthesia after general surgery.

EMTAGS:
Heart 0921; Therapy 0160; Cardiovascular system 0920; Aged 0019; Adult 0018 ; Major clinical study 0150; Human 0888; Intravenous drug administration 0182; Article 0060; Priority journal 0007
DRUG DESCRIPTORS:
*esmolol--drug therapy--dt; *esmolol--clinical trial--ct
MEDICAL DESCRIPTORS:
*tachycardia--drug therapy--dt; *hypertension--drug therapy--dt
postoperative period; aged; adult
EMCLAS DRUG CODES:
03710020000; 03701020102

L9 ANSWER 11 OF 18 HCAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1993:573951 HCAPLUS
DOCUMENT NUMBER: 119:173951
TITLE: Administration of nebivolol after coronary artery bypass in patients with altered left ventricular function
AUTHOR(S): Goldstein, Marcelo; Vincent, Jean Louis; De Smet, Jean Marie; Barvais, Luc; Van Nueten, Luc; Scheijgrond, Henk; d'Hollander, Alain; Leclerc, Jean Louis; Kahn, Robert J.
CORPORATE SOURCE: Dep. Intensive Care, Erasme Univ., Brussels, Belg.
SOURCE: J. Cardiovasc. Pharmacol. (1993), 22(2), 253-8
CODEN: JCPCDT; ISSN: 0160-2446
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This prospective, double-blind study used invasive monitoring and echo-Doppler techniques to compare the hemodynamic effects of nebivolol, a new .beta.1-selective .beta.-blocking agent with those of **atenolol** in patients recovering from coronary artery bypass grafting **surgery**. Five milligrams nebivolol and 50 mg **atenolol** equally decreased **heart** rate (HR) and blood pressure (BP) but, nebivolol, in contrast to **atenolol**, caused no decrease in stroke index (SI), cardiac index (CI), and right ventricular ejection fraction (RVEF). These differences appeared to be related in part to different peripheral effects of the two agents because nebivolol administration was assocd. with a redn. in systemic vascular resistance (SVR). After .ltoreq.10 days of treatment, acceleration of aortic flow velocity increased and isovolumic relaxation time decreased with nebivolol but not with **atenolol** treatment. Both drugs were equally well tolerated. Therefore, nebivolol shares most of its effects with classical .beta.1-blockers but is devoid of the potentially harmful effects on cardiac output (CO) and peripheral resistance.

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